What is claimed is:

1. A hand/eye calibration method comprising:

(a) calculating a projective invariant shape descriptor from at least two images consecutively obtained through a camera mounted on a robot hand;

(b) extracting corresponding points between the images by using the projective invariant shape descriptor;

(c) calculating a rotation matrix for the corresponding points from translation of the robot;

(d) calculating translation vector for the corresponding points from translation and rotation of the robot; and

(e) finding a relation between the robot hand and the camera based on the rotation matrix calculated in step (c) and the translation vector calculated in step (d).

2. The method of claim 1, wherein the corresponding points are used as calibration targets to perform the hand/eye calibration.

3. The method of claim 1, wherein the rotation matrix R has a value calculated by $t_{c1} = R^{-1} t_{p1}$,

where t_{c1} is an image vector and t_{p1} is motion information of the robot hand.

4. The method of claim 1, wherein the translation vector t is calculated by $t = (R_{p1} - 1)^{-1}(R t_{c1} - t_{p1})$,

where R denotes a rotation matrix, $t_{c'I}$ denotes an image vector, (R_{pl}, t_{pl}) denotes motion information already known by a user, and I denotes a projective invariant shape descriptor for the corresponding points.

5. The method of claim 1, wherein a coordinate system of the robot hand is calculated by multiplying a coordinate system of the camera by the rotation matrix and adding the translation vector to a result of the multiplication.

6. The method of claim 1, wherein the projective invariant shape descriptor is calculated by $I \equiv \frac{\det(q_5 q_1 q_4)\det(q_5 q_2 q_3)}{\det(q_5 q_1 q_3)\det(q_5 q_2 q_4)} = \frac{\det(P_5 P_1 P_4)\det(P_5 P_2 P_3)}{\det(P_5 P_1 P_3)\det(P_5 P_2 P_4)}$,

where P denotes points of the object, q denotes points of images corresponding to the points of the object P, and *det(·)* is defined as

$$\det(q_1 q_2 q_3) = f \begin{bmatrix} x_1 & x_2 & x_3 \\ y_1 & y_2 & y_3 \\ 1 & 1 & 1 \end{bmatrix}$$

$$\det(P_1 P_2 P_3) = f \begin{bmatrix} X_1 & X_2 & X_3 \\ Y_1 & Y_2 & Y_3 \\ 1 & 1 & 1 \end{bmatrix} = 2^k \, (Area\ of\ \Delta P_1 P_2 P_3) .$$

7. The method of claim 1, wherein step (a) is characterized by dividing a contour of the two-dimensional images into N intervals, calculating a coordinate for each point constituting each interval and repeating calculation of a projective invariance for the coordinate while moving the coordinate by 1/N times of a length of the contour until the coordinate corresponds to an initial location of each interval.

8. The method of claim 7, wherein the projective invariant shape descriptor for each of N intervals is calculated by

$$X_1(k) = (X(k), Y(k), 1),$$

$$X_2(k) = (X(\frac{N}{5} + k), Y(\frac{N}{5} + k), 1),$$

$$X_2(k) = (X(\frac{N}{5} + k), Y(\frac{N}{5} + k), 1),$$

$$X_3(k) = (X(\frac{2N}{5} + k), Y(\frac{2N}{5} + k), 1),$$

$$X_4(k) = (X(\frac{3N}{5} + k), Y(\frac{3N}{5} + k), 1),$$

$$X_5(k) = (X(\frac{4N}{5} + k), Y(\frac{4N}{5} + k), 1),$$

where $1 \le k \le N$, *X(k)* and *Y(k)* denotes X and Y axis coordinate function, and

$$I(k) = \frac{\det(X_5 X_1 X_4)\det(X_5 X_2 X_3)}{\det(X_5 X_1 X_3)\det(X_5 X_2 X_4)} .$$

9. The method of claim 1, wherein step (b) further comprises:

(b-1) defining errors for the projective invariant shape descriptors and calculating noisy invariance;

(b-2) calculating a threshold to be used to set corresponding points according to the noisy invariance;

(b-3) extracting boundary data from the images and presenting the extracted boundary data by subsampling N data;

(b-4) minimizing the projective invariant shape descriptor;

(b-5) transforming the following image into a previous image according to the minimized projective invariant shape descriptor;

(b-6) resetting distance between boundary data in consideration of the ratio of distance between boundary data before the transformation to distance between boundary data after the transformation; and

(b-7) finding similarities between the boundary data and extracting corresponding points between the previous image and the following image.

10. The method of claim 9, wherein the errors are defined by using a Gaussian noise model.

11. The method of claim 9, wherein the hand/eye calibration method is characterized by repeating steps (b-4) through (b-6) until the errors are within a predetermined scope.

12. A method of extracting corresponding points between images, the method comprising:

(a) defining errors for a projective invariant shape descriptor for a two-dimensional image from at least two images obtained at a predetermined interval and calculating noisy invariance;

(b) calculating a threshold to be used to set corresponding points according to the noisy invariance;

(c) extracting boundary data from the images and presenting the extracted boundary data by subsampling N data;

(d) minimizing the projective invariant shape descriptor;

(e) transforming a following image into the following image according to the minimized projective invariant shape descriptor;

(f) resetting distance between boundary data in consideration of the ratio of distance between boundary data before the transformation to distance between boundary data after the transformation; and

(g) finding similarities between the boundary data and extracting corresponding points between the previous images and the following image.

13. The method of claim 12, wherein the errors are defined by using a Gaussian noise model.

14. The method of claim 12, wherein the steps (d) through (f) are repeated until the errors are within a predetermined scope.

15. A computer readable medium having embodied thereon a computer program for a method of claim 1.

16. A computer readable medium having embodied thereon a computer program for a method of claim 12.